

Patent claims

1. Method for reduction of an echo in uplink data (19 to 22) coming from a terminal (2, 3) of a telecommunications network (6,8),
5 where a downlink data copy (25) is made of downlink data (13) to be transmitted from the telecommunications network (6,8) in the direction of the terminal (3), with a downlink data copy (25) being decoded (transcoder 18) and used for reduction (10) of
10 the echoes in uplink data (21), while downlink data (13) is transmitted (6) in the direction of the terminal (2, 3).
2. Method in accordance with Claim 1, characterized in that the downlink data copy (25) and the uplink data
15 (19 to 22) are decoded and an echo in the decoded uplink data (19 to 22) is removed taking into account the decoded downlink data copy (25).
3. Method in accordance with Claim 1 or 2, characterized in that the telecommunications network is a mobile
20 radio network, especially a cellular mobile radio network and the terminal is a mobile radio terminal.
4. Method in accordance with one of the previous claims, characterized in that, to avoid delay by decoding and encoding the downlink data copy (25) is only
25 transcoded once and in particular is not encoded back into the original format.
5. Method in accordance with one of the previous claims,

characterized in that,
the uplink data (19 to 23) coming from the terminal
(2, 3) and the downlink data is encoded into a mobile
radio codec format, especially AMR format.

- 5 6. Method in accordance with one of the previous claims,
characterized in that,
the transmission in the telecommunications network is
undertaken at least partly packet oriented, especially
via ATM, especially over ATM AAL-2 data connections.
- 10 7. Method in accordance with one of the previous claims,
characterized in that,
downlink data is used in each case for echo
suppression in uplink data coming after it arriving at
the echo canceller device containing an echo of this
15 downlink data, to take account of the data runtime,
especially to the terminal and back and/ or the
acoustic signal delay time from a loudspeaker to a
microphone.
8. Device (11) for reducing an echo in uplink data (19 to
20 23) to be transmitted over a telecommunications
network (8, 6) from a mobile radio terminal (2, 3),
- with a copying device (17) for copying downlink data
(13) to be sent to the terminal (3) in a downlink data
copy (25),
25 - with a device (26) for forwarding the downlink-data
in the direction of the terminal (2, 3),
- with a transcoding device (18) for transcoding the
downlink data copy (25),

- with a device (9) for analyzing the downlink data copy (25) for an echo suppression in the uplink data (21).

Method in accordance with Claim 1

5 characterized in that

the telecommunications network is a mobile radio network, especially a cellular mobile radio network and the terminal is a mobile radio terminal

9. Device in accordance with Claim 7,
10 characterized in that
only one device is provided for transcoding the downlink data copy (25) but no device for transcoding back into the original format.

10. Device in accordance with one of the Claims 7 or 8,
15 characterized in that,
the uplink data (19 to 23) coming from the terminal (2, 3) is encoded into a mobile radio codec format, especially AMR format.

11. device in accordance with one of the Claims 7-9,
20 characterized in that,
the transmission in the telecommunications network occurs at least partly over ATM, especially over ATM AAL-2 connections.

12. Device in accordance with one of the Claims 8-10,
25 characterized in that,
it features a delay device through which the downlink data is used in each case for echo suppression of uplink data arriving after it in time, containing an

echo of this downlink data, to take account of the data delay time, especially to the terminal and back and/or the acoustic signal delay time from a loudspeaker to a microphone.